CLAIMS

1. A method for finding a selected data service in a computer system having a distributed lookup system and a first host computer, the method comprising:

(a) running a first federated bean in the first host computer, the federated bean having a cache memory and a plurality of methods for retrieving information from the cache memory;

(b) receiving in the first federated bean, for each data service that has registered with the lookup service, a notification containing a proxy to the data service, the first federated bean thereupon storing the proxy in the cache memory;

(c) using the lookup service to locate the first federated bean; and

(d) calling a method in the located first federated bean to retrieve from the cache memory a proxy to the selected data service.

2. The method of claim 1 wherein the computer system comprises a second host computer and the method further comprises:

(e) registering a second federated bean in the second host computer with the lookup service; and

(f) receiving in the first federated bean a notification from the lookup service, the notification containing information concerning a location of the second federated bean, the first federated bean thereupon storing the information in the cache memory.

3. The method of claim 2 wherein a second selected data service is available on the second host computer and wherein step (f) comprises receiving in the first federated bean a notification from the lookup service, the notification containing a name of the second host computer and a location of a second lookup service containing a proxy to the second selected data service.

4. The method of claim 3 further comprising:

(g) using the name of the second host computer and the location of a second lookup service to retrieve the proxy to the second selected data service; and

(h) using the retrieved proxy to control the second selected data service.

5. The method of claim 4 wherein step (d) comprises calling a method in the located first federated bean to retrieve from the cache memory the information concerning the location of the second federated bean.

6. The method of claim 2 wherein step (f) comprises receiving in the first federated bean a notification from the lookup service, the notification containing an object containing information for locating the second federated bean, the first federated bean thereupon storing the object in the cache memory.

7. The method of claim 1 wherein the method further comprises:

(e) using the retrieved proxy to control the selected data service.

8. The method of claim 7 wherein the selected data service has an interface with a plurality of methods and wherein step (e) comprises using the retrieved proxy to call at least one of the plurality of methods in the interface.

9. Apparatus for finding a selected data service in a computer system having a distributed lookup system and a first host computer, the apparatus comprising:

a first federated bean in the first host computer, the federated bean having a cache memory and a plurality of methods for retrieving information from the cache memory;

a listener that receives in the first federated bean, for each data service that has registered with the lookup service, a notification containing a proxy to the data service, the first federated bean having a mechanism that stores the proxy in the cache memory;

a mechanism that uses the lookup service to locate the first federated bean; and

a mechanism that calls a method in the located first federated bean to retrieve from the cache memory a proxy to the selected data service.

10. The apparatus of claim 9 wherein the computer system comprises a second host computer and the apparatus further comprises:

a mechanism that registers a second federated bean in the second host computer with the lookup service; and

wherein the notification from the lookup service contains information concerning a location of the second federated bean and wherein the first federated bean thereupon stores the information in the cache memory.

11. The apparatus of claim 10 wherein a second selected data service is available on the second host computer and wherein the notification from the lookup service contains a name of the second host computer and a location of a second lookup service containing a proxy to the second selected data service.

12. The apparatus of claim 11 further comprising:

a method in the first federated bean that uses the name of the second host computer and the location of a second lookup service to retrieve the proxy to the second selected data service; and

a mechanism that uses the retrieved proxy to control the second selected data service.

13. The apparatus of claim 12 wherein the mechanism that calls a method in the located first federated bean to retrieve from the cache memory a proxy to the selected data service comprises a mechanism that calls a method in the located first federated bean to retrieve from the cache memory the information concerning the location of the second federated bean.

14. The apparatus of claim 10 wherein the notification from the lookup service containing information concerning the location of the second federated bean contains an object containing information for locating the second federated bean and the first federated bean having a mechanism that stores the object in the cache memory.

15. The apparatus of claim 9 further comprising a mechanism that uses the retrieved proxy to control the selected data service.

16. The apparatus of claim 15 wherein the selected data service has an interface with a plurality of methods and wherein the mechanism that uses the retrieved proxy to control the selected data service comprises a mechanism that uses the retrieved proxy to call at least one of the plurality of methods in the interface.

17. A computer program product for finding a selected data service in a computer system having a distributed lookup system and a first host computer, the computer program product comprising a computer usable medium having computer readable program code thereon, including:

first federated bean program code operable in the first host computer, the federated bean program code establishing a cache memory in the first host computer and having a plurality of methods for retrieving information from the cache memory;

program code that receives in the first federated bean, for each data service that has registered with the lookup service, a notification containing a proxy to the data service, the first federated bean thereupon storing the proxy in the cache memory;

program code that uses the lookup service to locate the first federated bean; and

program code that calls a method in the located first federated bean to retrieve from the cache memory a proxy to the selected data service.

18. The computer program product of claim 17 wherein the computer system comprises a second host computer and the computer program product further comprises:

program code that registers a second federated bean in the second host computer with the lookup service; and

program code that receives in the first federated bean a notification from the lookup service, the notification containing information concerning a location of the second federated bean, the first federated bean thereupon storing the information in the cache memory.

19. The computer program product of claim 18 wherein a second selected data service is available on the second host computer and wherein the notification containing information concerning a location of the second federated bean contains a name of the second host computer and a location of a second lookup service containing a proxy to the second selected data service.

20. The computer program product of claim 19 further comprising:

program code that uses the name of the second host computer and the location of a second lookup service to retrieve the proxy to the second selected data service; and program code that uses the retrieved proxy to control the second selected data service.

21. A computer data signal embodied in a carrier wave for finding a selected data service in a computer system having a distributed lookup system and a first host computer, the computer data signal comprising:

first federated bean program code operable in the first host computer, the federated bean program code establishing a cache memory in the first host computer and having a plurality of methods for retrieving information from the cache memory;

program code that receives in the first federated bean, for each data service that has registered with the lookup service, a notification containing a proxy to the data service, the first federated bean thereupon storing the proxy in the cache memory;

program code that uses the lookup service to locate the first federated bean; and

program code that calls a method in the located first federated bean to retrieve from the cache memory a proxy to the selected data service.

22. Apparatus for finding a selected data service in a computer system having a distributed lookup system and a first host computer, the apparatus comprising:

first federated bean means in the first host computer, the federated bean means having a cache memory and means for retrieving information from the cache memory;

means for receiving in the first federated bean, for each data service that has registered with the lookup service, a notification containing a proxy to the data service, the first federated bean having means for storing the proxy in the cache memory;

means for using the lookup service to locate the first federated bean; and means in the located first federated bean for retrieving from the cache memory a proxy to the selected data service.

23. The apparatus of claim 22 wherein the computer system comprises a second host computer and the apparatus further comprises:

means for registering a second federated bean in the second host computer with the lookup service; and

means for receiving in the first federated bean a notification from the lookup service, the notification containing information concerning a location of the second federated bean, the first federated bean thereupon storing the information in the cache memory.

24. The apparatus of claim 23 wherein a second selected data service is available on the second host computer and wherein the notification from the lookup service contains a name of the second host computer and a location of a second lookup service containing a proxy to the second selected data service.

25. The apparatus of claim 24 further comprising:

means in the first federated bean for using the name of the second host computer and the location of a second lookup service to retrieve the proxy to the second selected data service from the cache memory; and

means for using the retrieved proxy to control the second selected data service.

26. The apparatus of claim 25 wherein the means for retrieving from the cache memory in the first federated bean a proxy to the selected data service comprises means for calling a method in the located first federated bean to retrieve from the cache memory the information concerning the location of the second federated bean.

27. The apparatus of claim 23 wherein the notification from the lookup service containing information concerning the location of the second federated bean contains an object containing information for locating the second federated bean and the first federated bean comprises means for storing the object in the cache memory.

28. The apparatus of claim 22 further comprising means for using the retrieved proxy to control the selected data service.

29. The apparatus of claim 28 wherein the selected data service has an interface with a plurality of methods and wherein means for using the retrieved proxy to control the selected data service comprises means for using the retrieved proxy to call at least one of the plurality of methods in the interface.